UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/287,214	04/05/1999	JOSEPH MIDDLETON	CISCP628	6022

26541	7590	11/28/2003

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EXAMINER
HOANG, PHUONG N

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 September 2003</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>14 - 27</u> is/are pending in the application.

    4a) Of the above claim(s) <u>1 - 13</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>14 - 27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Rozario, US patent no. 6,253,262.

As to claim 14, Rozario teaches dynamically partitioning (dynamic allocate of

new requests into the buffer based on the priority of the new request, col. 10 lines 35 –

41) into a plurality of priority lists, directing a new data belonging to a highest priority list

(the new access request is a high priority request,.... Before all the low priority requests,

col. 5 lines 25 – 38), reading data from a highest priority (read is occurring alone, the

output of the gate 158 is high, col. 7 lines 15 – 20) non-empty priority list (inherent),

transferring data read without movement between storage cells (shifting dynamics of the

pointers 110 and 112, col. 6 lines 15 – 18, col. 9 lines 58 – 62, and col. 11 lines 50 - 55).

Rozario does not explicitly teach transferring data after reading.

It would have been obvious for one skilled in the art to modify Rozario's system

to transfer data after reading because it saves space for highest priority list.

As to claim 21, this is apparatus claim of claim 13. See claim 13 above for

rejection.

Claims 15 – 20, 22 - 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rozario, US patent no. 6,253,262 in view of Sherlock, US patent

no. 6,269,413.

As to claim 15, Rozario teaches write pointer (write pointers, col. 5 lines 56 –

67). Rozario does not explicitly teach a plurality of read pointers.

Sherlock teaches a plurality of read pointers (read and write pointers, col. 4 lines

37 – 45).

It would have been obvious to apply the teaching of Sherlock to Rozario's system

because the read pointers support dynamic allocation.

As to claim 16, Rozario modified by Sherlock teaches writing data to a location

in the memory determined by write pointer (it is the functionality of write pointer) and

incrementing the write pointer (each write operation …. Increment, col. 9 lines 26 – 35).

As to claim 17, Rozario modified by Sherlock teaches reading data from a

location determined by read pointers (it is functionality of read pointer) corresponding to

the highest priority non-empty list (see explained in claim 14).

As to claim 18, Sherlock teaches a count register (read and write pointers in

conventional FIFO buffer systems are maintained by counters, the read and write

pointers in buffer system 400 are maintained in register files, col. 4 lines 38 – 40 and

col. 9 lines 26 - 35).

As to claim 19, Sherlock teaches incrementing the read pointer, count registers

(increment one of read counter, col. 9 lines 26 – 36).

As to claim 20, it would have been obvious for one skilled in the art to modify the

system the increment the counter only after a delay because it is a design choice.

As to claims 22 – 27, see claims 15 – 20 above.

Response to Arguments

Applicant's arguments filed on 9/8/03 have been fully considered but they are not

persuasive.

Applicant argued that on claim 14, it would have not have been obvious for one

skilled in the art to modify Rozario's system to transfer data after reading (page 9 first

paragraph), "there is no capability for a high priority request to become a low priority

request or vice versa", "the concept of transferring data read from one priority list to

another priority list has no meaning as in the context of the Rozario system (page 9

second paragraph). On claim 18, the registers do not indicate a number of storage cells

allocated to each of plurality of priority lists (page 9 last paragraph).

Rozario teaches transferring data without moving the storage cells (dynamic

shifting pointers, col. 6 lines 15 – 18, col. 9 lines 58 – 62, and col. 11 lines 50 – 55) and

it is obvious for one skilled in the art to recognize that the data has been read before

shifting pointers. In support of the examiner's statement of obviousness, Stiffler is cited

to show transferring data read to a next lower priority list after reading without

movement between storage cells (after the task identity information has been read from

memory, ... point to the location of the identity information of the next highest priority

task, col. 1 lines 54 – 60). Applicant did not claim "there is no capability for a high

priority request to become a low priority request or vice versa", "the concept of transferring data read from one priority list to another priority list".

The registers indicate a number of storage cells allocated to each of plurality of priority lists (read and write pointers in conventional FIFO buffer systems are maintained by counters, the read and write pointers in buffer system 400 are maintained in register files, col. 4 lines 38 – 40 and col. 9 lines 26 - 35).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (703)

605-4239. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30

pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee can be reached on (703)305-8498. The fax phone

numbers for the organization where this application or proceeding is assigned are

(703)746-7239 for regular communications and (703)746-7238 for After Final

communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703)746-

7140.

Ph

November 19, 2003

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100